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February 28, 2014

04-Ala-880-28.4/29.2

04-0A7104

Project ID 0400000160

ACNHPI-880-1(070)E

Addendum No. 6

Dear Contractor:

This addendum is being issued to the contract for CONSTRUCTION ON STATE HIGHWAY IN ALAMEDA COUNTY IN ALAMEDA AND OAKLAND FROM 0.2 MILE SOUTH OF 29TH AVENUE OVERCROSSING TO 0.3 MILE NORTH OF 23RD AVENUE OVERCROSSING.

Submit bids for this work with the understanding and full consideration of this addendum. The revisions declared in this addendum are an essential part of the contract.

Bids for this work will be opened on Tuesday, March 18, 2014.

This addendum is being issued to revise the Project Plans, the Notice to Bidders and Special Provisions and the Bid book

Project Plan Sheets 46, 67, 171, 250, 267, 272, 315, 316, 317, 318, 319, and 320 are revised. Copies of the revised sheets are attached for substitution for the like-numbered sheets.

Project Plan Sheet 654A is added. A copy of the added sheet is attached for addition to the project plans.

In the Special Provisions, Section 5-1.14, "SUPPLEMENTAL PROJECT INFORMATION," the table titled "Supplemental Project Information," the last row is revised as follows:

<p>Available for inspection at the District Office</p> <p>Telephone no.: (510) 286-5209</p>	<ol style="list-style-type: none"> 1. Storm Water Information Handout 2. Preliminary Site Investigation and Aerially Deposited Lead Report 3. Asbestos and Deteriorated Lead-Containing Paint Survey Report 816 27th Avenue in Oakland, CA 4. Asbestos and Deteriorated Lead-Containing Paint Survey Report 823 27th Avenue in Oakland, CA 5. Structural Evaluation of Crabtree Parcel 816 27th Avenue Oakland, CA 94601 6. Non-Storm Water Information Package 7. Sources of Reclaimed Waste Water
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In the Special Provisions, Section 10-1.01, "ORDER OF WORK," the twelfth paragraph is deleted.

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In the Special Provisions, Section 10-1.01, "ORDER OF WORK," item 3 of the twenty third paragraph is deleted.

In the Special Provisions, Section 10-1.01, "ORDER OF WORK," paragraphs are added as attached.

In the Special Provisions, Section 10-1.32, "WATERING," is revised as attached.

In the Special Provisions, Section 10-1.135, "RIGHT OF WAY OBSTRUCTIONS," is revised as attached.

In the Special Provisions, Section 12, "BUILDING WORK," is added as attached.

In the Bid book, in the "Bid Item List," Items 45, 47, 94, 98, 107, 188, 192, 194, and 226 are revised, Items 255, 256 and 257 are added and Item 254 is deleted as attached.

To Bid book holders:

Replace pages 5, 7, 8, 12, 14, 15 of the "Bid Item List" in the Bid book with the attached revised pages 5, 7, 8, 12, 14, 15 of the Bid Item List. The revised Bid Item List is to be used in the bid.

Inquiries or questions in regard to this addendum must be communicated as a bidder inquiry and must be made as noted in the Notice to Bidders section of the Notice to Bidders and Special Provisions.

Indicate receipt of this addendum by filling in the number of this addendum in the space provided on the signature page of the Bid book.

Submit bids in the Bid book you now possess. Holders who have already mailed their book will be contacted to arrange for the return of their book.

Inform subcontractors and suppliers as necessary.

This addendum and attachments are available for the Contractors' download on the Web site:

http://www.dot.ca.gov/hq/esc/oe/project_ads_addenda/04/04-0A7104

If you are not a Bid book holder, but request a book to bid on this project, you must comply with the requirements of this letter before submitting your bid.

Sincerely,



MOHSEN SULTAN
Chief, Office of Plans, Specifications & Estimates
Office Engineer
Division of Engineering Services

Attachments

Add to 10-1.01 ORDER OF WORK

The Contractor shall comply with the following requirements while working within or on the following properties:

1. 816 27th Avenue, Oakland, CA (Parcel 62333)
2. 823 27th Avenue, Oakland, CA (Parcel 62334)

The Contractor shall notify the Engineer 45 days prior to performing any work within or on Parcel 62333 or Parcel 62334.

The Contractor shall notify and receive confirmation that all utility service providers have temporarily or permanently terminated services (electrical, telephone, water, sewer and natural gas) to each property prior to performing any demolition activities. Upon confirmation that utility services have been terminated, the Contractor shall locate and cap all permanently terminated existing underground utility laterals at the property line, as shown on the plans.

At all times when the Contractor has access to the temporary construction easement on Parcel 62333, the Contractor shall protect and secure the property and the existing structure that will remain (Building No. 1). This is inclusive of protecting the interior and contents of the existing structure from construction debris, weather and unauthorized entry.

At all times when the Contractor has access to the temporary construction easements associated with Parcel 62334 and within the permit to enter and construct area on Parcel 62334, the Contractor shall secure the property in a manner equivalent to the existing conditions and prevention of unauthorized entry, inclusive of installing temporary fence. The Contractor shall also maintain full and unimpeded access to the existing parking lot, existing parking stalls (25) and driveway associated with the ongoing operations of Parcel 62334, unless approved otherwise by the Engineer.

The Contractor shall submit a Demolition Staging Plan to the Engineer 20 working days prior to the proposed work. The Demolition Staging Plan shall be prepared and signed by an engineer who is registered as a Civil Engineer in the State of California, and include a schedule defining the proposed work, demolition work hours, staging areas and truck access routes.

The Contractor shall prepare and receive approval of a construction schedule for all work on Parcel 62334. Said construction schedule shall include two or more stages of construction and shall allow the Engineer to coordinate the placement and relocation of steel storage containers on paved areas of Parcel 62334. The Engineer will be responsible for relocating the steel containers that are located on Parcel 62334. The Contractor shall not disturb or move steel storage containers at any time. The Contractor shall provide the Engineer 30 days notice prior to the requirement of relocating steel storage containers. The Contractor shall provide the Engineer one 10 working day period to perform the one time relocation of the steel storage containers. The Contractor shall have no access to Parcel 62334 during the one 10 working day period to relocate the steel storage containers. The Contractor shall install temporary construction fencing around all staged construction areas, unless approved otherwise by the Engineer.

While performing the work within Temporary Construction Easement (TCE) 62334-3 and TCE 62334-5 and within the permit to enter and construct area on Parcel 62334, the Contractor may reconfigure existing designated on-site parking stalls in such a manner as to temporarily remove up to six parking stalls for a maximum of 30 working days. All of the Contractor's work to be performed on TCE 62334-3 and TCE 62334-5 and within the permit to enter and construct area on Parcel 62334 shall start and end within one 30 working day construction period on Parcel 62334, unless approved otherwise by the Engineer. For the Contractor's work to be performed on TCE 62334-3 and TCE 62334-5 and within the permit to enter and construct area on Parcel 62334, the Contractor shall only be allowed to perform work between the hours of 7:00 AM to 12:00 noon.

After completion of the work on TCE 62334-3 and TCE 62334-5 and within the permit to enter and construct area on Parcel 62334, the Contractor shall provide the Engineer one 10 working day period to perform the relocation of the steel storage containers onto the newly paved area within TCE 62334-3 and TCE 62334-5 and within the permit to enter and construct area on Parcel 62334.

During the Contractor's work on TCE 62334-4 and TCE 62334-6, the Contractor may reconfigure existing designated on-site parking stalls in such a manner as to temporarily remove up to eight parking stalls, for a maximum of 25 working days. All of the Contractor's work to be performed on TCE 62334-4 and TCE 62334-6 shall start and end within one 25 working day period, inclusive of the one 10 working day period required by the Engineer to relocate steel storage containers and contents; and the Contractor shall only be allowed to perform work between the hours of 7:00 AM to 12:00 noon.

The Contractor shall reconfigure the on-site parking stalls associated with Parcel 62334 to provide 25 parking stalls. The Contractor shall perform the parking lot striping within one 5 working day period, and said work shall be performed between the hours of 7:00 AM and 12:00 noon.

All work within Temporary Construction Easements shall be completed within 50 days of the first day of occupation of each property within the limits of the Temporary Construction Easement, unless allowed otherwise. Should the Contractor fail to complete construction within the 50 days of the first day of construction within the property, the Contractor shall become liable for all costs arising from the Contractor's failure to complete all work within the Temporary Construction Easement. No additional working days shall be granted for additional occupation of Temporary Construction Easements.

All work performed on TCE 62334-3, TCE 62334-5, TCE 62334-4 and TCE 62334-6 and within the permit to enter and construct area on Parcel 62334, shall be completed within one consecutive 60 working day period.

10-1.32 WATERING

Watering shall conform to the provisions in Section 17, "Watering," of the Standard Specifications and these special provisions.

Water for use on this project shall be nonpotable water and shall be furnished and applied as provided in Section 17, "Watering," of the Standard Specifications.

Attention is directed to the source or sources of reclaimed waste water for use on the project as provided in "Materials Information" available to contractors.

Attention is directed to "Beginning of Work, Time of Completion and Liquidated Damages," of these special provisions regarding availability of water.

Reclaimed waste water from sources, not listed in the "Materials Information," that are developed for use on the project shall meet the California Department of Health Services water reclamation criteria and the Regional Water Quality Control Board requirements. The Contractor shall obtain either a waste water discharge permit or a waiver from the Regional Water Quality Control Board. Copies of permits or waivers from the Regional Water Quality Control Board, for sources not listed in the "Materials Information," shall be delivered to the Engineer before using reclaimed waste water on the project.

Full compensation for developing nonpotable water supply, loading and transporting nonpotable water, and labeling as specified shall be considered as included in the contract lump sum price paid for develop water supply and no additional compensation will be allowed therefor.

If the Engineer orders the use of potable water, an adjustment of compensation for develop water supply will be made in conformance with the provisions in Section 4-1.03C, "Changes in Character of Work," of the Standard Specifications.

10-1.135 RIGHT OF WAY OBSTRUCTIONS

Attention is directed to the occupied improvements located within the right of way at:

Parcel 62334 - 829 27th Avenue, Oakland, CA94601

Parcel 62410 - 646 Kennedy Street, Oakland, CA 94601

It is anticipated that these improvements will be vacated and removed by the time outlined in "Order of Work" for parcel 62334 and by the June 1, 2016 for parcel 62410.

The Contractor shall take no action that will result in unnecessary inconvenience, disproportionate injury or any action coercive in nature to the occupants of these improvements who have not yet moved from the improvements.

SECTION 12. BUILDING WORK

SECTION 12-1. GENERAL REQUIREMENTS

12-1.01 SCOPE

This work includes the demolition and removal of existing buildings, structures and foundations.

Attention is directed to "Project Information" of these special provisions.

Parcel 62333

1. Protection of existing two-story wood frame building with concrete slab foundation and plywood siding (Building No.1).
2. Protection of existing pavement, landscaping, fencing and other private property appurtenances that are outside the demolition and removal construction area.
3. Demolition and removal of one single-story wood and steel framed warehouse building with concrete slab foundation, plywood siding and flat wood framed roof with sheathing (Building No. 2).
4. Demolition and removal of one single-story wood and steel framed warehouse building with concrete slab foundation, plywood siding and flat wood framed roof with sheathing (Building No. 3).
5. Installation of utility service laterals for electrical, natural gas, sanitary sewer and domestic water.

Parcel 62334

6. Protection of existing pavement, landscaping, fencing and other private property appurtenances that are outside the demolition and removal construction area.
7. Demolition and removal of one single-story wood frame storage shed with concrete slab foundation and wood framed roof with sheathing (Wood Shed).
8. Demolition and removal of one single-story wood and metal framed roof carport (Carport No. 1).
9. Demolition and removal of one single-story masonry building with concrete slab foundation and wood framed roof with sheathing (Masonry Building).
10. Demolition and removal of one single-story wood and steel framed carport with concrete foundation and metal roof (Carport No. 2).

For Parcel 62333 and Parcel 62334, the recommended asbestos and lead-based paint abatement actions, as identified in the "Asbestos and Deteriorated Lead-Containing Paint Survey Report 816 27th Avenue in Oakland, California", and "Asbestos and Deteriorated Lead-Containing Paint Survey Report 823 27th Avenue in Oakland, California" will be performed by others prior to June 1, 2014.

Sections 10 through 95 of the Standard Specifications do not apply to the work in Section 12 except when specific reference is made thereto.

12-1.02 ABBREVIATIONS

Abbreviations:

AAMA	American Architectural Manufacturers' Association
ACI	American Concrete Institute
AGA	American Gas Association
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association
APA	Engineered Wood Association
APWA	American Public Works Association
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
BIA	Brick Industry Association
CBC	California Building Code
CEC	California Electrical Code
CMC	California Mechanical Code
CPC	California Plumbing Code
ESO	Electrical Safety Orders
FM	FM Global
FS	Federal Specification
GA	Gypsum Association
GANA	Glass Association of North America
ICC	International Code Council
ISO	International Organization for Standardization
LEED	Leadership in Energy and Environmental Design
NAAMM	National Association of Architectural Metal Manufacturers
NEC	National Electrical Code
NFPA	National Fire Protection Association or National Forests Products Association
PEI	Porcelain Enamel Institute
RIS	Redwood Inspection Service
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
TCNA	Tile Council of North America
TPI	Truss Plate Institute
WCLIB	West Coast Lumber Inspection Bureau (stamped WCLB)
WCLB	Grade stamp for WCLIB
WI	Woodwork Institute
WWPA	Western Wood Products' Association

12-1.03 COOPERATION

Comply with "Cooperation" in Section 10, "Constructions Details," of these special provisions.

Comply with all security policies of the State facility.

Submit requests for approval to the Engineer before interrupting any services for the purpose of making or breaking a connection. Include in the request the proposed time period necessary to complete the work. Allow the Engineer 5 days to review each request.

You may obtain electrical power and water from existing State electrical power and water outlets within the project limits free of charge for contract operations, provided that such utility services are in service and are not required by the State for other purposes. Outlets must not be modified.

Do not use State telephone facilities.

12-1.04 SUBMITTALS

Items to be submitted to the Engineer must be approved under Section 5-1.02, "Plans and Working Drawings," of the Standard Specifications.

Items to be furnished to the Engineer do not require approval.

The Engineer may request submittals for materials or products where submittals have not been specified in these special provisions, or may request that you include additional information in specified submittals, as necessary to determine the quality or acceptability of such materials or products.

Submit the following items within 50 days of contract approval:

1. Demolition Staging Plan

Submit at least 5 sets of each item. Two sets will be returned either approved for use or returned for correction and resubmittal.

Submit the Schedule of Values within 20 days of contract approval. Submit at least 2 sets.

Each item submitted must include a descriptive title, the name of the project, district, county, contract number, and must reference the applicable portion of the contract documents that it pertains to. Plans and detailed drawings must be not larger than 24" x 36."

The material lists must include the name of manufacturer, catalog number, size, capacity, finish, all pertinent ratings, and identification symbols used on the plans and in these special provisions for each unit.

Deliver submittals to Offices of Structure Design, Documents Unit.

Allow 25 days for approval or return for correction of each submittal or resubmittal. Should the Engineer fail to complete the review within the time specified and Engineer determines that your controlling operation is delayed or interfered with by delay in review, an extension of time commensurate with the delay in completion of the your work will be granted under Section 8-1.09, "Right of Way Delays," of the Standard Specifications.

Remove unapproved samples and samples not incorporated in the work from State property.

Furnish 3 copies of the following items to the Engineer at the job site:

1. Parts lists and service instructions packaged with or accompanying the equipment
2. Operating and maintenance instructions
3. Manufacturer's warranties
4. Qualification data

12-1.05 SCHEDULE OF VALUES

Divide the Schedule of Values into sections representing the cost of each separate building or structure. Do not include work that is not part of the building or structure in the building or structure cost. Include this work under a specific section as General Work.

List indirect costs and bond premiums as separate line items of work.

Identify the sections representing each building or structure as to the building or structure they represent and break them down to show the corresponding value of each craft, trade or other significant portion of the work. Provide a sub-total for each section.

The Schedule of Values must be approved by the Engineer before any partial payment estimate is prepared.

The sum of the items listed in the Schedule of Values must equal the contract lump sum price for building work. Do not list overhead and profit. Include bond premiums and other such items in the mobilization bid item for the entire project.

12-1.06 INSPECTION

Any work that will be covered or not visible in the completed work must be inspected and approved by the Engineer before progress of work conceals portions to be inspected. Notify the Engineer not less than 72 hours in advance of when such inspections are needed.

Provide adequate temporary lighting to allow the Engineer to inspect the project as each portion is completed.

12-1.07 UTILITY CONNECTION

Make all arrangements and obtain all permits and licenses required for the extension of and connection to each utility service applicable to this project. For extensions not performed or provided by the utility, provide all labor and materials necessary for such extensions and install any intermediate equipment required by the serving utilities.

The costs incurred by you for (1) utility permits, licenses, connection charges, and excess length charges, (2) the extensions of utilities beyond the limits shown on the plans, and (3) furnishing and installing any intermediate equipment required by the serving utilities, will be paid for as extra work under Section 4-1.03D of the Standard Specifications.

12-1.08 MEASUREMENT AND PAYMENT

The contract lump sum price paid for building work includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in performing the building work, including utility service lateral work, complete in place, as shown on the plans, as specified in the Standard Specifications and these special provisions, and as directed by the Engineer.

Full compensation for any incidental materials and labor, not shown on the plans or specified that are necessary to complete the building work, including utility service lateral work, are considered as included in the contract lump sum price paid for building work and no additional compensation will be allowed therefor.

12-1.09 PROJECT RECORD DRAWINGS

Prepare and maintain one set of project record drawings, using an unaltered set of original project plans, to clearly show all as-constructed information for the project.

As a minimum, project record drawings must include the following information:

1. Any plan clarifications or change orders
2. Locations of any underground utilities
3. Location, size, type, and manufacturer of all major products or components used in the work.

Prepare project record drawings as follows:

1. Place markings on the project record drawings using red ink or red pencil.
2. Do not eradicate or write over original figures.
3. Neatly line out superseded material.
4. Submit additional drawings if the required information cannot be clearly shown on the original set of project plans. The additional drawings must be not less than 11" x 17" in size. Label each sheet with the contract number.
5. Sign and date each sheet verifying that all as-built information shown on the drawings is correct.

Review the project record drawings monthly with the Engineer during the progress of the work to assure that all changes and other required information are being recorded.

Before completion of the work, request a review of the project record drawings to determine the completeness and adequacy of them. If the project record drawings are unacceptable, you must inspect, measure, and survey the project as necessary to record the required additional information.

Deliver the completed project record drawings to the Engineer before acceptance of the contract.

SECTION 12-2. SITEWORK

12-2.01 REMOVING PORTIONS OF EXISTING FACILITIES

PART 1 - GENERAL

Scope: This work shall consist of removing portions of the existing facilities, including removal of existing work to gain access to or for new work, in accordance with the details shown on the plans and these special provisions.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

PREPARATION

The limits of removal shall be located and identified. Items to be removed and the interface of items to be removed and items to remain intact shall be identified and marked.

Prior to removing concrete or masonry, a saw cut approximately one inch deep shall be made along the limits of removal on all faces that will be visible in the completed work.

REMOVAL

Removal shall be to the limits shown on the plans. Removal shall be done carefully to minimize damage to the portions to remain. Remaining portions that are damaged by the Contractor's operation shall be restored to original condition at the Contractor's expense.

Assemblies to be salvaged which require dismantling for removal shall be matchmarked before dismantling.

Existing apparatuses, devices, or accessories which would be functionally impaired by new construction or remodeling shall be moved, brought out to new surfaces, or provided with new access covers, as necessary to restore apparatuses, devices, or accessories to their original usefulness.

Piping and conduits to be abandoned shall be capped or plugged.

Surfaces that are exposed to view at the limits of removal work shall be patched, bumps shall be removed and depressions filled, and the surface shall be finished to match the existing surrounding surfaces. Depressions in concrete less than one inch deep shall be deepened to one inch minimum depth before filling with cement mortar.

DISPOSAL

Materials that are to be removed, shall become the property of the Contractor and shall be disposed of outside the highway right of way in accordance with the requirements in Section 7-1.13, "Disposal of Material Outside of the Highway Right of Way," of the Standard Specifications.

For Parcel 62333 and Parcel 62334, the recommended asbestos and lead-based paint abatement actions, as identified in the "Asbestos and Deteriorated Lead-Containing Paint Survey Report 816 27th Avenue in Oakland, California", and "Asbestos and Deteriorated Lead-Containing Paint Survey Report 823 27th Avenue in Oakland, California" will be performed by others prior to June 1, 2014.

SALVAGE

Materials or equipment shown on the plans to be salvaged shall remain the property of the State and shall be removed, cleaned and stockpiled at a location at the project site designated by the Engineer.

12-2.02 RELOCATING MATERIALS AND EQUIPMENT

PART 1 - GENERAL

SUMMARY

Scope: This work shall consist of relocating existing materials and equipment in accordance with the details shown on the plans and these special provisions.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

RELOCATION

Materials or equipment to be relocated shall be removed carefully to avoid damage to the materials or equipment or to the materials or equipment which are to remain. Assemblies to be relocated which require dismantling for removal shall be matchmarked before dismantling.

The Contractor shall notify the Engineer prior to the relocation work in order that the materials or equipment may be inspected for existing damage.

Materials or equipment to be relocated shall have all adhering concrete, mastics, earth or other deleterious materials removed and shall have all exterior surfaces cleaned.

Materials or equipment which are damaged by the Contractor's operations shall be replaced or restored to match the condition of the materials or equipment prior to the beginning of the Contractor's operations. Replacement or restoration of damaged materials or equipment shall be at the Contractor's expense.

Connections, anchorages and fasteners for relocated materials and equipment shall match existing and shall be furnished and installed by the Contractor. Assemblies which have been dismantled shall be reassembled to match the existing installation. Relocated materials and equipment shall be installed as required for new work.

Ends of piping and conduits to be abandoned shall be capped.

Surfaces that are exposed to view upon removal or relocation of materials or equipment shall be patched. Bumps shall be removed and depressions filled, and the surface finished to match the existing surfaces. Depressions in concrete less than one inch deep shall be deepened to one-inch minimum depth before filling with cement mortar.

DISPOSAL

Materials from existing facilities to be reused in the work, in the opinion of the Engineer, is unsuitable for use shall become the property of the Contractor and disposed of as provided in Section 7-1.13, "Disposal of Material Outside of the Highway Right of Way." of the Standard Specifications. The unsuitable material shall be replaced as ordered by the Engineer and will be paid for as extra work as provided in Section 4-1.03D, "Extra Work," of the Standard Specifications.

SECTION 12-3. (BLANK)

SECTION 12-4. (BLANK)

SECTION 12-5. (BLANK)

SECTION 12-6. (BLANK)

SECTION 12-7. (BLANK)

SECTION 12-8. (BLANK)

SECTION 12-9. (BLANK)

SECTION 12-10. (BLANK)

SECTION 12-11. (BLANK)

SECTION 12-12. (BLANK)

SECTION 12-13. (BLANK)

SECTION 12-14. (BLANK)

SECTION 12-15. MECHANICAL

12-15.01 MECHANICAL WORK

PART 1 - GENERAL

Scope: This work shall consist of performing mechanical work in accordance with the details shown on the plans and these special provisions.

Mechanical work shall include furnishing all labor, materials, equipment and services required for providing plumbing and natural gas distribution systems.

Earthwork, foundations, electrical, and such other work incidental and necessary to the proper installation and operation of the mechanical work shall be in accordance with the requirements specified for similar type work elsewhere in these special provisions.

System layouts are generally diagrammatic and location of equipment is approximate. Exact routing of pipes, ducts, etc., and location of equipment is to be governed by structural conditions and obstructions. Equipment requiring maintenance and inspection is to be readily accessible.

SUBMITTALS

Product Data:

A list of materials and equipment to be installed, manufacturer's descriptive data, and such other data as may be requested by the Engineer shall be submitted for approval.

Manufacturer's descriptive data shall include complete description, performance data and installation instructions for the materials and equipment specified herein.

Manufacturer's descriptive data shall be submitted for the following:

- Water Valve
- Water Valve Box
- Water Service Lateral Pipe
- Natural Gas Lateral

QUALITY ASSURANCE

Codes and Standards: Mechanical work, including equipment, materials and installation, shall conform to the CBC, CMC, and to the California Code of Regulations, Title 8, Chapter 4, Division of Industrial Safety (DIS).

WARRANTY

Warranties and Guarantees: Manufacturer's warranties and guarantees for materials or equipment used in the work shall be delivered to the Engineer at the jobsite prior to acceptance of the contract.

SYSTEM IDENTIFICATION

Piping, Valves and Equipment:

Identification of piping, valves and equipment shall be as shown on the plans or these special provisions:

PART 2 – PRODUCTS (Not applicable)

PART 3 – EXECUTION (Not applicable)

12-15.02 PIPE, FITTINGS AND VALVES

PART 1 - GENERAL

SUMMARY

Scope: This work shall consist of furnishing and installing pipes, fittings and valves in accordance with the details shown on the plans and these special provisions. Pipe, fittings and valves shall include such plumbing and piping accessories and appurtenances, not mentioned, that are required for the proper installation and operation of the plumbing and piping systems.

All piping insulation and wrapping material shall be in accordance with the requirements specified under "Mechanical Insulation," in this Section 12-15.

The pipe sizes shown on the plans are nominal inside diameter. No change in the pipe size shown on the plans shall be permitted without written permission from the Engineer.

The pipe and fitting classes and material descriptions shall be as specified herein. No change in class or description shall be permitted without written permission from the Engineer.

QUALITY ASSURANCE

Codes and Standards: Pipe, fittings and valves shall be installed in accordance with the requirements in the CPC, the manufacturer's recommendations and the requirements specified herein.

PART 2 - PRODUCTS

MATERIALS

PIPE AND FITTINGS (Class and Description)

A1: Schedule 40 galvanized steel pipe conforming to ASTM Designation: A 53, with 150 psi galvanized malleable iron banded screwed fittings and galvanized steel couplings. The weight of the zinc coating shall be not less than 90 percent of that specified in ASTM Designation: A 53.

B2:

Schedule 40 black steel pipe conforming to ASTM Designation: A 53, with 150 psi black malleable iron banded screwed fittings and black steel couplings.

Steel pipe coating, where required, shall be factory applied plastic. Pipe coating shall be Standard Pipe Protection, X-Tru-Coat (20-mil thickness); Pipe Line Service Corporation, Republic; 3M Company, Scotchkote 205 (12-mil thickness); or equal.

C1: Hub and plain end cast iron soil pipe with neoprene gaskets conforming to Cast Iron Soil Pipe Institute's Standard 301. Pipe, fittings and gaskets shall be of one manufacturer.

C2: Hubless cast iron soil pipe with neoprene gaskets, corrugated stainless steel shields and stainless steel clamps conforming to Cast Iron Soil Pipe Institute's Standard 301. Joint materials shall be furnished by pipe manufacturer.

H2: Type K hard copper tubing conforming to ASTM Designation: B 88, with wrought copper or cast bronze solder joint pressure fittings, stop type couplings and threaded adapters. Solder shall be lead-free.

P1: Polyvinyl chloride (PVC) gravity sewer plastic pipe and fittings conforming to ASTM Designation: D 3034, Standard Dimension Ratio (SDR) 35, with integral bell and bell and spigot rubber gasketed joints or conforming to ASTM Designation: D2665 with solvent welded fittings. Rubber gaskets shall conform to ASTM Designation: F 477. Stainless steel clamps with rubber boots shall not be used.

P4: Polyvinyl chloride (PVC) plastic pipe and fittings shall conform to AWWA Designation: C900, Class 150, Standard Dimension Ratio (SDR) 18. Pipe shall have bell end with a solid cross section elastomeric ring conforming to ASTM Designation: D 1869. P5: Polyethylene plastic gas pipe and fittings conforming to ASTM Designation: D 1248 and D 2513 with Standard Dimension Ratio (SDR) 11, rated for 60 psi working pressure at 73°F, socket type fittings, joined by heat fusion.

P6: Polyvinyl chloride (PVC) natural gas pipe, Class 315, conforming to ASTM Designation: D 2513. Fittings shall be Schedule 40 conforming to ASTM Designation: D 2513, and shall be primed and glued. Primer shall conform to ASTM Designation: F656. Solvent cement shall conform to ASTM Designation: D2564. Approved adapters shall be used for transition to other pipe materials.

Unions (for Steel Pipe): Unions (for steel pipe) shall be 250 psi, threaded malleable iron, ground joint, brass to iron seat, galvanized or black to match piping.

Unions (for Copper or Brass Pipe): Unions (for copper or brass pipe) shall be 150 psi cast bronze, ground joint, bronze to bronze seat with silver brazing threadless ends or 125 psi cast brass, ground joint, brass to brass seat with threaded ends.

VALVES

Gate Valve (2½-inch and smaller):

Gate valve (2½-inch and smaller) shall be bronze body and trim, removable bonnet and non rising stem, Class 125 and same size as pipe in which installed. Gate valve shall be Crane, 438; Nibco Scott, T-113; Jenkins, 370; or equal.

Gate valve in nonferrous water piping systems may be solder joint type with bronze body and trim. Valve shall be Kitz, 59; Nibco Scott, S-113; Jenkins, 1240; or equal.

CLEANOUTS

Cleanout to Grade: Cleanout to grade shall be cast iron ferrule type. Plug shall be countersunk brass or bronze with tapered threads. Cleanout to grade shall be Wade, No. W-8450; Smith, 4420; Zurn, No 1440; or equal.

MISCELLANEOUS ITEMS

Pipe Wrapping Tape and Primer:

Pipe wrapping tape shall be pressure sensitive polyvinyl chloride or pressure sensitive polyethylene tape having nominal thickness of 20 mils. Wrapping tape shall be Polyken, 922; Manville, Trantex VID-20; Scotchrap, 51; or equal.

Pipe wrapping primer shall be compatible with the pipe wrapping tape used.

Valve Box: Valve box shall be precast high density concrete with polyethylene face and cast iron traffic rated cover marked "WATER," "GAS" or "CO-SS" as applicable. Extension shall be provided as required. Valve box shall be Christy, B3; Brooks Products Company, 3TL; Frazer, 3; or equal.

PART 3 - EXECUTION

INSTALLATION

INSTALLATION OF PIPES AND FITTINGS

Pipe and Fittings: Pipe and fittings shall be installed in accordance with the following designated uses:

Designated Use	Pipe and Fitting Class
Domestic water underground within 5 feet of the building	A1 or H2
Domestic water underground 5 feet beyond the building	P4
Sanitary drain piping underground within 5 feet of the building	, C1 or C2
Sanitary drain pipe, 5 feet beyond the building	P1
Natural gas, above ground	B2
Natural gas, underground	B2 (plastic coated), P5 or P6

Installing Piping:

Water piping shall be installed generally level, free of traps and bends, and arranged to conform to the building requirements.

Piping installed underground shall be tested as specified elsewhere in these special provisions before backfilling.

Underground copper pipe shall have brazed joints. Underground plastic pipe shall be buried with No. 14 solid bare copper wire. Wire ends at pipe ends shall be brought up 8 inches and looped around pipe.

Gas piping shall not be installed under building concrete slabs or structure. An insulating connection and valve shall be installed above ground at each building supply.

Plastic pipe used for natural gas shall be below grade outside of building only. Transition to Class B2 plastic coated shall be before meter, regulator, or building wall with approved metal to plastic transition fitting. PVC natural gas pipe shall be installed in accordance with International Association of Plumbing and Mechanical Officials (IAPMO) Standard: IS10.

Water pipe near sewers:

Water pipe shall not be installed below sewer pipe in the same trench or at any crossing, or below sewer pipe in parallel trenches less than 10 feet apart.

When a water pipe crosses above a sewer pipe, a vertical separation of at least 12 inches between the top of the sewer and the bottom of the water pipe shall be maintained.

When water and sewer pipe is installed in the same trench, the water pipe shall be on a solid shelf at least 12 inches above the top of the sewer pipe and 12 inches to one side.

Cutting Pipe: Pipe shall be cut straight and true and the ends shall be reamed to the full inside diameter of the pipe after cutting.

Damaged Pipe: Pipe that is cracked, bent or otherwise damaged shall be removed from the work.

Pipe Joints and Connections:

Joints in threaded steel pipe shall be made with teflon tape or a pipe joint compound that is nonhardening and noncorrosive, placed on the pipe and not in the fittings.

The use of thread cement or caulking on threaded joints will not be permitted. Threaded joints shall be made tight. Long screw or other packed joints will not be permitted. Any leaky joints shall be remade with new material.

Exposed polished or enameled connections to fixtures or equipment shall be made with special care, showing no tool marks or threads.

Cleaning and Closing Pipe: The interior of all pipe shall be cleaned before installation. All openings shall be capped or plugged as soon as the pipe is installed to prevent the entrance of any materials. The caps or plugs shall remain in place until their removal is necessary for completion of the installation.

Wrapping and Coating Steel Pipe:

Steel pipe buried in the ground shall be wrapped or shall be plastic coated as specified herein:

1. Wrapped steel pipe shall be thoroughly cleaned and primed as recommended by the tape manufacturer.
2. Tapes shall be tightly applied with 1/2 uniform lap, free from wrinkles and voids with approved wrapping machines and experienced operators to provide not less than 40-mil thickness.
3. Plastic coating on steel pipe shall be factory applied. Coating imperfections and damage shall be repaired to the satisfaction of the Engineer.
4. Field joints, fittings and valves for wrapped and plastic coated steel pipe shall be covered to provide continuous protection by puttying and double wrapping with 20-mil thick tape. Wrapping at joints shall extend a minimum of 6 inches over the adjacent pipe covering. Width of tape for wrapping fittings shall not exceed 2 inches. Adequate tension shall be applied so tape will conform closely to contours of fittings. Putty tape insulation compounds approved by the Engineer shall be used to fill voids and provide a smooth even surface for the application of the tape wrap.

Wrapped or coated pipe, fittings, and field joints shall be approved by the Engineer after assembly. Piping shall be placed on temporary blocks to allow for inspection. Deficiencies shall be repaired to the satisfaction of the Engineer before backfilling or closing in.

Thrust Blocks:

Thrust blocks shall be formed by pouring concrete between pipe and trench wall. Thrust blocks shall be sized and so placed as to take all thrusts created by maximum internal water pressure.

Plastic pipe underground shall be provided with thrust blocks and clamps at changes in direction of piping, connections or branches from mains 2 inches and larger, and all capped connections.

Dielectric Waterway: Dielectric waterway shall be provided between metal pipes of different material, and between brass or bronze valves and steel piping.

Insulating Union and Insulating Connection:

Insulating union and insulating connection shall be provided where shown and at the following locations:

1. In metallic water, gas and air service connections into each. Insulating connections shall be installed on the exterior of the building, above ground and after shut-off valve.
2. In water, gas and air service connections in ground at point where new metallic pipes connect to existing metallic pipes. Install valve box above insulating connection.
4. At each end of buried ferrous pipe protected by cathodic protection.

INSTALLATION OF VALVES

Exterior Valves: Exterior valves located underground shall be installed in a valve box marked "Water." Extensions shall be provided as required.

INSTALLATION OF CLEANOUTS

Cleanouts:

A concrete pad 18 inches long and 4 inches thick shall be placed across the full width of trench under cleanout Wye or 1/8 bend. Cast iron soil pipe (C1 or C2) and fittings shall be used from Wye to surface. Required clearance around cleanouts shall be maintained.

Cleanout risers outside of a building installed in a surface other than concrete shall terminate in a cleanout to grade. Cleanout to grade shall terminate in a valve box with cover marked "CO-SS". Top of box shall be set flush with finished grade. Cleanout plug shall be 4 inches below grade and shall be located in the box to provide sufficient room for rodding.

FIELD QUALITY CONTROL

Testing:

The Contractor shall test piping at completion of roughing in, before backfilling, and at other times as directed by the Engineer.

The system shall be tested as a single unit, or in sections as approved by the Engineer. The Contractor shall furnish necessary materials, test pumps, instruments and labor and notify the Engineer at least 3 working days in advance of testing. After testing, the Contractor shall repair all leaks and retest to determine that leaks have been stopped. Surplus water shall be disposed of after testing as directed by the Engineer.

The Contractor shall take precautions to prevent joints from drawing while pipes and appurtenances are being tested. The Contractor shall repair damage to pipes and appurtenances or to other structures resulting from or caused by tests.

General Tests:

All piping shall be tested after assembly and prior to backfill, pipe wrapping, connecting fixtures, wrapping joints and covering the pipe. Systems shall show no loss in pressure or visible leaks.

The Contractor shall test systems according to the following schedule for a period of not less than 4 hours:

Test Schedule		
Piping System	Test Pressure	Test Media
Sanitary sewer and vent	10-foot head	Water
Water	125 psig	Water
Gas (except P6)	100 psig	Air
Gas (P6)	50 psig	Air

During testing of water systems, valves shall be closed and pipeline filled with water. Provisions shall be made for release of air.

Sanitary sewers shall be cleared of obstructions before testing for leakage. The pipe shall be proved clear of obstructions by pulling an appropriate size inflatable plug through the pipe. The plug shall be moved slowly through the pipe with a tag line. The Contractor shall remove or repair any obstructions or irregularities.

Sanitary sewer pipes beyond 5 feet perpendicular to the building shall be tested for leakage for a period of not less than 4 hours by filling with water to an elevation of 4 feet above average invert of sewer or to top of manholes where less than 4 feet deep. The system shall show no visible leaks. The sewer may be tested in sections with testing water progressively passed down the sewer as feasible. Water shall be released at a rate that will not create water hammer or surge in plugged sections of sewer.

SECTION 12-16. ELECTRICAL

12-16.01 ELECTRICAL WORK

PART 1 - GENERAL

SUMMARY

Scope: This work shall consist of performing electrical work including furnishing all labor, materials, equipment and services required to construct, connect and install the complete electrical system in accordance with the details shown on the plans and these special provisions.

Related Work: Earthwork, foundations, painting, mechanical and such other work incidental to and necessary for the proper installation and operation of the electrical system shall be done in conformance with the provisions elsewhere in these special provisions.

SYSTEM DESCRIPTION

System layouts are generally diagrammatic and location of equipment is approximate. Exact routing of conduits and other facilities and location of equipment is to be governed by structural conditions and other obstructions, and shall be coordinated with the work of other trades. Equipment requiring maintenance and inspection shall be located where it is readily accessible for the performance of such maintenance and inspection.

QUALITY ASSURANCE

Regulatory Requirements: All electrical work performed and materials installed shall be in conformance with the provisions in Section 74-1.02, "Regulations and Code," of the Standard Specifications, and the requirements in the CA Code of Regs, Title 24, Part 6, "California Energy Code."

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

TESTING

After the installation work for the various systems has been completed, each electrical system shall be tested in the presence of the Engineer to demonstrate that the electrical systems function properly. The Contractor shall make necessary repairs, replacements, adjustments and retests at his expense.

Final inspection for the completed electrical system will take place after all the various systems have been tested.

The Engineer shall be notified 15 days in advance of testing and State personnel training on the jobsite.

12-16.02 BASIC MATERIALS AND METHODS

PART 1 - GENERAL

SUMMARY

Scope: This work shall consist of furnishing and installing the basic materials of the electrical work, including conduits, utility pole, fittings, and wiring devices, in accordance with the details shown on the plans and these special provisions. The basic materials shall include those accessories and appurtenances, not mentioned, that are required for the proper installation and operation of the electrical system.

SUBMITTALS

Product Data:

A list of all materials and equipment to be installed and the manufacturer's descriptive data shall be submitted for approval.

Manufacturer's descriptive data shall include catalog cuts, complete description, performance data and installation instructions for the materials and equipment specified herein.

QUALITY ASSURANCE

Commissioning: Not Used.

PART 2 - PRODUCTS

CONDUITS AND FITTINGS

Rigid Non-Metallic Conduit and Fittings: Rigid non-metallic conduit and fittings shall be Type 3 in conformance with the provisions in Section 86-2.05A, Subparagraph C, "Material," of the Standard Specifications.

ELECTRICAL BOXES

Pull Boxes:

Pull boxes shall be in conformance with the provisions in Section 86-2.06, "Pull Boxes," of the Standard Specifications.

Electrical pull box covers and traffic rated pull box covers shall be marked "ELECTRICAL."

MISCELLANEOUS MATERIALS

Warning Tape: Warning tape shall be 4 inches wide and contain the printed warning "CAUTION ELECTRICAL CONDUIT" in bold 3/4-inch black letters at 30-inch intervals on bright orange or yellow background. The printed warning shall be non-erasable when submerged under water and resistant to insects, acids, alkali, and other corrosive elements in the soil. The tape shall have a tensile strength of not less than 155 pounds per 4-inch wide strip and shall have a minimum elongation of 700 percent before breaking.

Pull Rope: Pull rope shall be nylon or polypropylene with a minimum tensile strength of 1800 pounds.

Watertight Conduit Plug: Watertight conduit plug shall be a hollow or solid stem expansion plug complete with inner and outer white polypropylene compression plates and red thermoplastic rubber seal. Seal material shall be non-stick type rubber resistant to oils, salt, and alkaline substances.

Anchorage Devices: Anchorage devices shall be corrosion resistant, toggle bolts, wood screws, bolts, machine screws, studs, expansion shields, or expansion anchors as required by the supporting device.

Electrical Supporting Devices:

Electrical supporting devices shall be one hole conduit clamps with clamp backs, hot-dipped galvanized, malleable iron.

Construction channel shall be 1-5/8 inches x 1-5/8 inches, 12-gage galvanized steel channel with 17/32-inch diameter bolt holes, 1-1/2 inches on center in the base of the channel.

Ground Rod: Ground rod shall be a 3/4-inch (minimum) galvanized or copper clad steel rod, 10 feet long, and shall conform to the requirements in NEMA GR-1.

PART 3 - EXECUTION

INSTALLATION

Conduit:

Conduits shall be installed as specified in Section 86-2.05C, "Installation," of the Standard Specifications and the following:

1. All conduits shall be rigid steel except as follows:
 - a. Rigid non-metallic conduit shall be used in underground, exterior locations.
2. Rigid non-metallic conduit bends of 30 degrees or greater shall be factory-made long radius sweeps. Bends less than 30 degrees shall be made using an approved heat box.
3. Locations of conduit runs shall be planned in advance.
4. Where practical, conduits shall be installed in groups of parallel, vertical or horizontal runs and at elevations that avoid unnecessary offsets.
5. Exposed conduit shall be installed parallel and at right angles to the building lines.
6. All metal conduits, fittings, and elbows in contact with soil or concrete shall be wrapped with a double layer of 20-mil thick pipe wrapping tape.

Conduit Terminations:

Rigid steel conduits shall be securely fastened to cabinets, boxes and gutters using 2 locknuts and insulating metallic bushing. EMT shall be securely fastened to cabinets, boxes and gutters using connectors. Conduit terminations at exposed weatherproof and cast boxes shall be made watertight using hubs.

Grounding bushings with bonding jumpers shall be installed on all conduits terminating at concentric knockouts and on all conduits containing service conductors, grounding electrode conductor, and conductors feeding separate buildings.

Rigid non-metallic conduit shall be terminated inside the underground pull boxes with an approved conduit bushing or fitting. All conduits shall enter vertically through the bottom of pull boxes.

All future conduits terminated in underground pull boxes or left exposed indoors and outdoors shall be provided with watertight conduit plugs.

Warning Tape: Warning tape shall be placed over each conduit in a trench. Each warning tape shall be centered over the conduit and shall be placed over the 6 inch layer of sand covering the conduit as specified elsewhere in these special provisions.

Outlet, Device and Junction Box Installation:

Where exposed rigid steel conduits are connected to an exposed outlet, device, or junction box at or below switch height, the box shall be a cast box.

No unused openings shall be left in any box. Knockout seals shall be installed to close openings.

Adjustments to locations of outlet, device and junction boxes may be made as required by structural conditions and to suit coordination requirements of other trades.

Pull Box Installation:

Pull box installation shall be in conformance with the provisions in Section 86-2.06C, "Installation and Use," of the Standard Specifications and the following:

1. Top of pull boxes shall be flush with surrounding grade or top of curb. In unpaved areas where pull box is not immediately adjacent to and protected by a concrete foundation, pole or other protective construction, the top of pull box shall be set at plus one inch above surrounding grade. Pull boxes shown on the plans in the vicinity of curbs shall be placed adjacent to the back of curb. Pull boxes shown on the plans adjacent to lighting standards shall be placed on the side of foundation facing away from traffic.

Anchorage:

Hangers, brackets, conduit straps, supports, and electrical equipment shall be rigidly and securely fastened to surfaces by means of toggle bolts on hollow masonry; expansion shields and machine screws, or expansion anchors and studs or standard preset inserts on concrete or solid masonry; machine screws or bolts on metal surfaces; and wood or lag screws on wood construction.

Anchorage devices shall be installed in conformance with the anchorage manufacturer's recommendations.

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
41	150771	REMOVE ASPHALT CONCRETE DIKE	LF	250		
42	150809	REMOVE CULVERT (LF)	LF	57		
43	150820	REMOVE INLET	EA	49		
44	150826	REMOVE MANHOLE	EA	6		
45	150832	REMOVE RETAINING WALL (CY)	CY	230		
46	150841	REMOVE SEWER PIPE	LF	460		
47	150853	REMOVE CONCRETE PAVEMENT (SQYD)	SQYD	8,840		
48	150860	REMOVE BASE AND SURFACING	CY	3,170		
49	152379	RELOCATE FENCE	LF	350		
50	152438	ADJUST FRAME AND COVER TO GRADE	EA	29		
51	152604	MODIFY INLET	EA	3		
52	152610	MODIFY MANHOLE	EA	6		
53	153103	COLD PLANE ASPHALT CONCRETE PAVEMENT	SQYD	9,840		
54	153121	REMOVE CONCRETE (CY)	CY	1,560		
55	153221	REMOVE CONCRETE BARRIER	LF	1,100		
56	155003	CAP INLET	EA	6		
57	155232	SAND BACKFILL	CY	340		
58	156590	REMOVE CRASH CUSHION (SAND FILLED)	EA	1		
59	157551	BRIDGE REMOVAL, LOCATION A	LS	LUMP SUM	LUMP SUM	
60	157552	BRIDGE REMOVAL, LOCATION B	LS	LUMP SUM	LUMP SUM	

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
81	204096	MAINTAIN EXISTING PLANTED AREAS	LS	LUMP SUM	LUMP SUM	
82	204099	PLANT ESTABLISHMENT WORK	LS	LUMP SUM	LUMP SUM	
83	206401	MAINTAIN EXISTING IRRIGATION FACILITIES	LS	LUMP SUM	LUMP SUM	
84	208000	IRRIGATION SYSTEM	LS	LUMP SUM	LUMP SUM	
85	208310	IRRIGATION SLEEVE	LF	270		
86	208738	8" CORRUGATED HIGH DENSITY POLYETHYLENE PIPE CONDUIT	LF	320		
87	210010	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	6		
88	210110	IMPORTED TOPSOIL (CY)	CY	4,130		
89	210350	FIBER ROLLS	LF	10,400		
90	220101	FINISHING ROADWAY	LS	LUMP SUM	LUMP SUM	
91	240100	LIME	TON	790		
92	240105	LIME STABILIZED SOIL	SQYD	17,600		
93	250401	CLASS 4 AGGREGATE SUBBASE	CY	2,540		
94	260203	CLASS 2 AGGREGATE BASE (CY)	CY	3,270		
95	270065	ASPHALTIC EMULSION (CURING SEAL)	TON	15		
96	280000	LEAN CONCRETE BASE	CY	1,840		
97	280015	LEAN CONCRETE BASE RAPID SETTING	CY	2,090		
98	390132	HOT MIX ASPHALT (TYPE A)	TON	20,800		
99	025743	PLACE HOT MIX ASPHALT DIKE (TYPE A MODIFIED)	LF	140		
100	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	250		

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
101	394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	46		
102	025744	PLACE HOT MIX ASPHALT DIKE (TYPE C MODIFIED)	LF	65		
103	394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	23		
104	025745	PLACE HOT MIX ASPHALT DIKE (TYPE F MODIFIED)	LF	420		
105	394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	550		
106	395000	LIQUID ASPHALT (PRIME COAT)	TON	25		
107	397005	TACK COAT	TON	15		
108	401050	JOINTED PLAIN CONCRETE PAVEMENT	CY	280		
109 (F)	477020	MECHANICALLY STABILIZED EMBANKMENT	SQFT	7,757		
110 (F)	025746	GEOSYNTEHTIC REINFORCED EMBANKMENT	SQFT	6,621		
111	490603	24" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	22,587		
112	490604	30" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	5,333		
113	490607	48" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	4,548		
114	490611	72" CAST-IN-DRILLED-HOLE CONCRETE PILING	LF	523		
115	498052	60" CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	LF	25		
116	500001	PRESTRESSING CAST-IN-PLACE CONCRETE	LS	LUMP SUM	LUMP SUM	
117	025747	PRESTRESSING CAST-IN-PLACE CONCRETE (TRANSVERSE)	LS	LUMP SUM	LUMP SUM	
118	500020	PRESTRESSING PRECAST GIRDER	LS	LUMP SUM	LUMP SUM	
119 (F)	510051	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	2,391		
120 (F)	510053	STRUCTURAL CONCRETE, BRIDGE	CY	7,541		

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
181	025751	21" AUTOMATIC DRAINAGE GATE	EA	1		
182	025752	SIDEWALK DRAIN	LF	61		
183	025753	8" CLAY SEWER PIPE	LF	210		
184	025754	18" CLAY SEWER PIPE	LF	230		
185	025755	SEWER MANHOLE	EA	4		
186	721015	ROCK SLOPE PROTECTION (LIGHT, METHOD B) (CY)	CY	130		
187	729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SQYD	150		
188	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	CY	1,130		
189	731507	MINOR CONCRETE (GUTTER DEPRESSION)	CY	120		
190	750001	MISCELLANEOUS IRON AND STEEL	LB	75,900		
191	750505	BRIDGE DECK DRAINAGE SYSTEM	LB	9,181		
192	800103	TEMPORARY FENCE (TYPE CL-6)	LF	7,440		
193	800320	CHAIN LINK FENCE (TYPE CL-4)	LF	680		
194	800360	CHAIN LINK FENCE (TYPE CL-6)	LF	1,940		
195	802560	10' CHAIN LINK GATE (TYPE CL-6)	EA	4		
196	810116	SURVEY MONUMENT (TYPE D)	EA	11		
197	820107	DELINEATOR (CLASS 1)	EA	57		
198	820130	OBJECT MARKER	EA	17		
199	025756	CONCRETE BARRIER MARKER	EA	53		
200	832001	METAL BEAM GUARD RAILING	LF	400		

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
221	840504	4" THERMOPLASTIC TRAFFIC STRIPE	LF	26,800		
222	840505	6" THERMOPLASTIC TRAFFIC STRIPE	LF	5,530		
223	840506	8" THERMOPLASTIC TRAFFIC STRIPE	LF	7,270		
224	840507	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 8-4)	LF	750		
225	840508	8" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	LF	1,180		
226	840515	THERMOPLASTIC PAVEMENT MARKING	SQFT	8,650		
227	840525	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	LF	21,300		
228	840526	4" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	LF	3,270		
229	840656	PAINT TRAFFIC STRIPE (2-COAT)	LF	105,000		
230	840666	PAINT PAVEMENT MARKING (2-COAT)	SQFT	1,120		
231	850101	PAVEMENT MARKER (NON-REFLECTIVE)	EA	5,560		
232	850111	PAVEMENT MARKER (RETROREFLECTIVE)	EA	3,160		
233	860090	MAINTAINING EXISTING TRAFFIC MANAGEMENT SYSTEM ELEMENTS DURING CONSTRUCTION	LS	LUMP SUM	LUMP SUM	
234	860201	SIGNAL AND LIGHTING	LS	LUMP SUM	LUMP SUM	
235	860297	SIGNAL AND LIGHTING (CITY)	LS	LUMP SUM	LUMP SUM	
236	025761	SIGNAL AND LIGHTING (STAGE CONSTRUCTION)	LS	LUMP SUM	LUMP SUM	
237	025762	SIGNAL AND LIGHTING (CITY) (STAGE CONSTRUCTION)	LS	LUMP SUM	LUMP SUM	
238	860402	LIGHTING (CITY STREET)	LS	LUMP SUM	LUMP SUM	
239	860415	LIGHTING (STAGE CONSTRUCTION)	LS	LUMP SUM	LUMP SUM	
240	860460	LIGHTING AND SIGN ILLUMINATION	LS	LUMP SUM	LUMP SUM	

BID ITEM LIST

04-0A7104

Item No.	Item Code	Item Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
241	025763	INTERCONNECTION SYSTEM (CITY STREET)	LS	LUMP SUM	LUMP SUM	
242	860797	ELECTRIC SERVICE (IRRIGATION)	LS	LUMP SUM	LUMP SUM	
243	025764	LONG LEAD-IN CABLE LOOP DETECTOR SENSOR UNIT	EA	1		
244	025765	CAMERA CONTROL UNIT	EA	2		
245	025766	VIDEO ENCODER UNIT	EA	2		
246	025767	GENERAL PACKET RADIO SYSTEM WIRELESS MODEM ASSEMBLY	EA	2		
247	025768	RACK MOUNT POWER STRIP	EA	2		
248	025769	EQUIPMENT SHELF WITH BRACKET	EA	2		
249	025770	HYBRID CAMERA CABLE AND CONNECTORS	LF	1,050		
250	025771	EMERGENCY VEHICLE DETECTOR SYSTEM	EA	7		
251	025772	TRAFFIC OPERATIONS SYSTEM	LS	LUMP SUM	LUMP SUM	
252	025773	TRAFFIC OPERATIONS SYSTEM (STAGE CONSTRUCTION)	LS	LUMP SUM	LUMP SUM	
253	869050	GUARD POST	EA	4		
254	BLANK					
255	802520	6' CHAIN LINK GATE (TYPE CL-6)	EA	1		
256	994650	BUILDING WORK	LS	LUMP SUM	LUMP SUM	
257	999990	MOBILIZATION	LS	LUMP SUM	LUMP SUM	

TOTAL BID:

\$ _____